



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/566,273

01/30/2006

Atsuo Okaichi

050868

1681

23850 7590 01/12/2009
KRATZ, QUINTOS & HANSON, LLP
1420 K Street, N.W.
Suite 400
WASHINGTON, DC 20005

EXAMINER

KRAMER, DEVON C

ART UNIT

PAPER NUMBER

3746

MAIL DATE

DELIVERY MODE

01/12/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/566,273	Applicant(s) OKAICHI ET AL.	
	Examiner JESSICA L. MYERS	Art Unit 3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-10 and 12-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-10,12-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The amendment and arguments filed on 10/14/2008 under 37 CFR 1.131 have been entered and considered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 1, 3-10 and 12-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claim 1 recites, "a compressor mechanism which is disposed in a lower portion of said container for compressing working fluid, a motor which is disposed in an upper portion of said compressor mechanism". It is not claim how the motor can be in the compressor mechanism. Did applicant intend to claim, a motor which is disposed in an upper portion of the container? Further, claim 1 recites that the discharge pipe is disposed in an upper space of the motor. Please note that the figures do not show a discharge pipe on an upper surface of a motor. The figures do show a discharge pipe on the upper surface of the casing.
5. Claims 9 and 14-16 recite the limitation "the mesh member". There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 5, 6, 7, 8, 9, 10 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,176,506 to Siebel (Siebel).

In Reference to Claim 1

Siebel teaches a compressor (see figure 1) comprising a container (hermetic shell (10)), a compressor mechanism (scroll member (80) which is lower than the cap (12) of the compressor) which is disposed in a lower portion of said container for compressing working fluid, a motor (including motor stator (32) which is located above the base (14) of the compressor) which is disposed in an upper portion of said compressor mechanism for driving said compressor mechanism, a discharge pipe (discharge fitting (20), see figure 1) which is disposed in an upper space of the said motor for discharging the compressed working fluid, an oil reservoir which is provided at a bottom of said container for storing refrigeration oil (see the bottom of shell (10) in figure 1 and see also column 5 lines 15-18), wherein a floating type wave-suppressing member (filter (170) is floating in the sense that it floats above the base (14) and below

Art Unit: 3746

the compressor) is provided in an interface between the working fluid and the refrigeration oil of said reservoir (the filter (170) separates a gaseous refrigerant from the oil contained in the bottom of the compressor, see column 6 lines 6-28, and would suppress waves formed in the oil reservoir), wherein said wave suppressing member comprises a divided member (the filter is formed as a stainless steel mesh which would divide the interface into several pieces) which extends astride said interface to divide said interface into a plurality of pieces.

In Reference to Claim 5

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said divided member comprises a honeycomb member (the filter is formed as a stainless steel mesh which would contain many pores or cells).

In Reference to Claim 6

Siebel teaches the compressor according to claim 1, wherein said wave-suppressing member comprises a porous member extending astride said interface (the filter is formed as a stainless steel mesh which would contain many pores).

In Reference to Claim 7

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a mesh member extending astride said interface (The filter (170) is a circularly shaped screen member that extends along the interface between the refrigerant and the oil, see figure 1).

In Reference to Claim 8

Art Unit: 3746

Siebel teaches the compressor according to claim 7 (see the rejection of claim 7 above), wherein said mesh member comprises a fibrous mesh member (The filter (170) is a circularly shaped screen member formed from interwoven fibers).

In Reference to Claim 9

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein the mesh member is disposed in a divided portion divided by said divided member (the mesh screen serves as the divided member and is thus disposed on its divided portion).

In Reference to Claim 10

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), wherein said wave-suppressing member comprises a plate member extending astride said interface (The filter (170) is a plate shaped screen member that lies across the interface between the oil and the refrigerant).

In Reference to Claim 16

Siebel teaches the compressor according to claim 5 (see the rejection of claim 5 above), wherein the mesh member is disposed in a divided portion divided by said divided member (the mesh screen serves as the divided member and is thus disposed on its divided portion).

5. Claims 1, 3, 4, 12, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 6,167,719 to Yakumaru et al. (Yakumaru et al.).

Art Unit: 3746

In Reference to Claim 1

Yakumaru et al. teach a compressor (see figure 1) comprising a container (cylindrical shell (30)), a compressor mechanism (compressor mechanism (30) extends into the lower portion of the casing) which is disposed in a lower portion of said container for compressing working fluid, a motor (motor mechanism (50) extends into an upper portion of the casing) which is disposed in an upper portion of said compressor mechanism for driving said compressor mechanism, a discharge pipe (discharge pipe (31)) which is disposed in an upper space of the said motor for discharging the compressed working fluid, an oil reservoir (oil reservoir (60A)) which is provided at a bottom of said container for storing refrigeration oil, wherein a floating type wave-suppressing member is provided in an interface between the working fluid and the refrigeration oil of said reservoir (float (71) would suppress waves formed in the oil reservoir), wherein said wave-suppressing member comprises a divided member which extends astride said interface to divide said interface into a plurality of pieces (the float unit also comprises a suction pipe (67) as well as a shut off plate (74) and an oil partition (66), both of which divide the interface between the oil and the refrigerant into a plurality of pieces).

In Reference to Claim 3

Yakumaru et al. teach the compressor according to claim 1 (see the rejection of claim 1 above), wherein said divided member comprises a plurality of plates standing in the vertical direction (including shut off plate (74) and oil partition (66)).

In Reference to Claim 4

Art Unit: 3746

Yakumaru et al. teach the compressor according to claim 3 (see the rejection of claim 3 above), wherein a plurality of said plates are assembled in a lattice form (the shut off plate (74) and oil partition (66) are assembled in a lattice form in the sense that they are arranged in a regular pattern).

In Reference to Claim 12

Yakumaru et al. teach the compressor according to claim 1 (see the rejection of claim 1 above), wherein bulk density of said floating type wave-suppressing members is set greater than density of the working fluid and smaller than density of the refrigeration oil (since the float (71) is designed to float on the oil, but not on the refrigerant, it would necessarily be denser than the refrigerant, but less dense than the oil, see column 6 lines 35-50).

In Reference to Claim 14

Yakumaru et al. teach the compressor according to claim 3 (see the rejection of claim 3 above), wherein the mesh member is disposed in a divided portion divided by said divided member (the float is arranged in a single portion of the interface which is divided by shut off plate (74)).

In Reference to Claim 15

Yakumaru et al. teach the compressor according to claim 4 (see the rejection of claim 4 above), wherein the mesh member is disposed in a divided portion divided by said divided member (the float is arranged in a single portion of the interface which is divided by shut off plate (74)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Siebel in view of U.S. Patent 6,264,448 to Itoh et al. (Itoh et al.).

Siebel teaches the compressor according to claim 1 (see the rejection of claim 1 above), but does not teach that the working fluid is carbon dioxide. Itoh et al. teach a compressor that uses carbon dioxide as a working gas (see column 1 lines 15-30). It would have been obvious to one of ordinary skill in the art at the time of invention to use carbon dioxide as a working fluid in the apparatus of Siebel as taught by Itoh et al. since carbon dioxide is more environmentally friendly than traditional refrigerants such as Freon.

Response to Arguments

8. Applicant's arguments filed 10/14/2008 have been fully considered but they are not persuasive. Applicant primarily argues that the difference between the cited art and the claimed invention is that the claimed invention is arranged as a vertical type compressor, while the compressors in the cited art are arranged as horizontal type

Art Unit: 3746

compressors. While this may be true, it is not required by the claims that the compressor be of the vertical type, only that the motor of the compressor be arranged in the upper portion of the compressor mechanism, while the compressor mechanism be disposed in a lower part of the container. In both cited pieces of art, the compressor mechanism is arranged in a "lower portion" of the compressor casing, where lower is taken to be a relative term, and a lower portion of the casing can be anywhere that is lower than the top of the casing. For this reason the cited art meets the requirements of the claims. Similarly, the motor is arranged in an upper portion of the compressor mechanism, where upper is taken to be a relative term, and an upper portion of the casing can be anywhere that is higher than the base of the compressor casing.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent 7,029,243 to Ono teaches a similar compressor with an oil filter.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

Art Unit: 3746

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JESSICA L. MYERS whose telephone number is (571)270-5059. The examiner can normally be reached on Monday through Friday, 8:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Devon C Kramer/
Supervisory Patent Examiner, Art
Unit 3746

Application/Control Number: 10/566,273

Page 11

Art Unit: 3746

/JLM